REMARKS

This is a response to the Office Action dated October 5, 2005.

In the outstanding Office Action the Examiner rejected Claims 1-30 under 35 U.S.C. § 102(e) as anticipated by United States Patent No. 5,532,030 to *Hirose et al.* Claims 1-30 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over the *Hirose et al.* reference in view of United States Patent Application Publication No. 2002/0156195 to *Hausmann.*

Reconsideration is respectfully requested in view of the attached November 21, 2005 *Declaration* of Randy D. Jester submitted under 37 C.F.R. § 1.116.

The Examiner was unpersuaded by Applicant's remarks of July 12, 2005 and the July 7 *Declaration of Randy Jester* submitted therewith, which, in effect, argued that the cited references do not disclose, teach, or suggest the claimed invention and that, in any event, evidence of unexpected results rebuts any *prima facie* case of obviousness. Specifically, the Examiner rejected Applicant's arguments that the *Hirose* reference did not suggest the claimed glass transition temperature. The claims should be reconsidered because the Examiner cited an immaterial portion of the *Hirose et al.* reference—the softening temperature—in order meet the glass transition temperature ("Tg") recitation of the pending claims. As is established in the attached *Declaration*, the glass transition temperature of a resin does not correspond to the softening temperature.

The present invention relates to films that are suitable for heat-sealing at low-temperatures. As embodied in claim 1, the films have at least one layer that consists essentially of a cycloolefin copolymer ("COC") which, critical to the performance of the invention for heat sealing, has a glass transition temperature of from about 30°C to about 55°C. Additional embodiments of the invention are directed to a heat sealed package containing the inventive films, and a method of heat sealing the films. The inventive films have several characteristics that are surprising: 1) the claimed films exhibit superior

seal strengths at low temperatures; and 2) the claimed composition is critical to achieve the improved sealing properties. These features are not at all taught by the art of record.

In the outstanding Office Action, the Examiner rejected the claims over the '030 *Hirose et al.* reference, stating that the *Hirose et al.* reference "discloses COC with a Tg range of 50 to 180 degrees C which is right in applicant's range." In fact, the *Hirose* reference, does **not** disclose a cycloolefin with a glass transition temperature in the range of 50°C-180°C. The passage apparently referred to by the Examiner is reproduced below (col. 3, lines 44-48 of the *Hirose et al.* reference).

> **The cycloolefin-based resin (A1) to be employed according to the present invention has a softening temperature (TMA) of usually –40° C. or higher, preferably 0°–180° C., more preferably 50°–180° C., as determined on a Thermal Mechanical Analyzer. The softening temperature (TMA) is**

Accordingly, the *Hirose et al.* reference discloses a COC resin with a TMA softening temperature of from 50°-180°C.

As stated in the enclosed *Declaration* at paragraph 6, the softening temperature is not equivalent to the glass transition temperature in COC resins. The softening temperature is generally measured as the temperature required to cause a specified deflection of the polymer under a certain load. *See, e.g.*, the test enumerated in *Hirose et al.* at column 3, lines 48-55. The glass transition temperature, on the other hand, is the point where the amorphous regions of the polymer become rigid, and is typically measured by differential scanning calorimetry. *Declaration* at paragraph 6. The temperature values in each respective test are, in fact, usually not the same for a given material. *Declaration* at paragraph 7. Furthermore, as stated in the *Declaration* at paragraph 8, the glass transition temperature of COC resins is generally 7°C -10°C higher than the softening temperature. Accordingly, COC resins having a softening temperature of between 50°C-180°C would not have the claimed Tg values. *Id.*

The only glass transition temperature range given for the COC resins in *Hirose et al.* is seen at column 3, lines 59-63:

> The cycloolefin-based (A1) resin has further a glass transition temperature (Tg) of, usually, −30° C. or higher, 60 preferably −10°–170° C., and a degree of crystallinity of, usually, 0 –20%, preferably 0–2%, as determined by X-ray diffraction method.

Thus, *Hirose et al.* states that the Tg may be from -10°C to 170°C; a vast temperature range which is over seven times as broad as the claimed Tg values and, consequently, not at all suggestive of the claimed range. *See, e.g., Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 24 USPQ2d 1321, 1332 (Fed. Cir. 1992).

All claims should, accordingly, be in condition for allowance. The lack of suggestion of the claimed Tg range coupled with the superior, unexpected results shown in Applicant's July 7 *Declaration* warrants issuance. Moreover, in addition to a complete lack of disclosure regarding the claimed Tg range, the art of record does not teach to use a film that *consists essentially* of COC resin, which is another salient feature of the claimed invention.

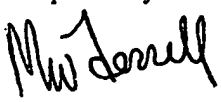
Additional claims are believed most clearly patentable. Claim 18, for example, recites a heat sealed package whose seal is effected at temperature of from 50-80°C; the low sealing temperature is not at all taught by the art of record. Claim 25 recites a method of heat sealing two layers of COC resin together at low temperatures, which is likewise not suggested by the cited references.

Applicant respectfully requests that the accompanying *Declaration* be admitted under 37 C.F.R. § 1.116(e). The explanation contained in the attached *Declaration* is necessary to show the differences between the glass transition temperature and the softening temperature—an important distinction as the Tg of the COC resin is central to the claimed subject matter. Indeed, Applicant has shown the claimed Tg range to be critical. Additionally, the subject matter in the attached *Declaration* was not presented

earlier in the prosecution because the assertion that the 50°C-180°C softening point in *Hirose et al.* anticipates the claimed range was not raised until the outstanding Office Action of October 5, 2005. *Note*: In the April 27th Office Action, the rejection was based on a range of 0°C to 180°C which, aside from being immensely broad, is not "right in applicant's range." The claimed 30°C-55°C Tg range is believed most clearly patentable in view of the evidence of record.

All claims should be allowed, for the reasons of record.

Respectfully submitted,



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